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Gene Regulation

Gene Regulation in Prokaryotes

In the nucleoid segment of the cell cytoplasm, the DNA of prokaryotes is organized into a round supercoiled chromosome. In blocks called operons, proteins that are fundamental for a particular intention are encoded together. All the qualities required to utilize lactose as a fuel source, for instance, are coded inside the lactose operon close to each other. Three sorts of administrative atoms happen in prokaryotic cells which will impact the outflow of operons: repressors, activators, and inducers. Repressors are proteins that hinder quality record in reaction to an outside improvement, while activators are proteins that, accordingly to an outside improvement, upgrade quality record. At long last, inducers are little particles that, figuring on the phone's needs and give, either initiate or stifle record.

Gene Regulation in Eukaryotes

Gene expression in eukaryotic cells is regulated by repressors as well as by transcriptional activators. In some cases, eukaryotic repressors simply interfere with the binding of other transcription factors to DNA. Other repressors compete with activators for binding to specific regulatory sequences. Some such repressors contain the same DNA-binding domain as the activator but lack its activation domain.

